

APPLICANT(S): E. Amitay  
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### **REMARKS**

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicant asserts that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

Pursuant to the request of the Examiner, the title has been amended and is now more descriptive.

### **Status of Claims**

Claims 37 – 45 and 56 -64 are pending in the application and have been rejected.

In order to more particularly point out and distinctly claim the invention, claim 37 has been amended and claim 64 has been canceled without prejudice.

### **CLAIM REJECTIONS**

#### **35 U.S.C. § 112 Rejection**

In the Office Action, the Examiner rejected claim 37 under 35 U.S.C. § 112, as being incomplete. Applicant respectfully traverses this rejection in view of the remarks that follow. The term “web index” has been more completely defined, consistent with its usage and meaning in the Specification, and accordingly claim 37 has been amended. No new matter was added. Therefore, it is respectfully requested that this rejection be withdrawn.

#### **35 U.S.C. § 103 Rejections**

In the Office Action, the Examiner rejected the claims 37 - 45 under 35 U.S.C. § 103(a), as being unpatentable over Prokoph (US Patent Publication 2002/0091671) in view of Cole et al. (US Patent 6,571,239, hereinafter "Cole") and rejected claims 56 – 62 and 64 under 35 U.S.C. § 103(a), as being unpatentable over Prokoph and Cole in view of Kim (US Patent Publication 2003/0208482). Applicant respectfully traverses these rejections in view of the remarks that follow.

Prokoph is not relevant to the herein claimed invention. This is because he does not deal with web indices. In fact, he is very specific that he is not dealing with them (see Paragraph 6) and thus, teaches away from the instant invention.

“Search engine providers have been pushing their search/data retrieval technology in an attempt to index the entire Internet. These approaches, however, struggle with several limitations. Due to the tremendous growth rate of the number and size of web pages, it has become very problematic for these technologies to provide the required processing power and the required storage to create and maintain the search indices. Moreover, a typical search pattern will result in an unwieldy number of search hits, making it difficult to analyze the results. The reason for the high number of hits is that most of the retrieved documents, though containing the search pattern, will not have any semantic relationship to the intended notion behind the search pattern; that is, most of the retrieved documents are just irrelevant.”

Accordingly, it is very clear that not only does Prokoph not search web indices, but it is also clear he does not even want to deal with them. Thus, not only does Prokoph not discuss “adding information from at least some of said user queries to said enhanced web index,” of claim 37, but he also fails to teach or disclose “searching an enhanced web index.” He does not address web indices, so he obviously does not teach searching them or updating them.

As related in Paragraph 9, Prokoph explains why searching web indices is inadequate in his opinion. So he again is clarifying that he is not dealing with web indices.

“Whichever combination of the above mentioned technologies are selected, severe disadvantages adhere. The relevance of the retrieved documents is generally poor, regardless of the type of relevance measure. Therefore, users typically need to issue more than one search request to find the information they are seeking. This iterative approach slows down the search process significantly. In any case, the highly relevant documents within a search result list are embedded in an often very large number of non-relevant documents (as judged by the user in an ex-post analysis).”

As taught in Paragraph 30 of Prokoph, he does not use a web index and instead:

“creates a search index that reflects the characteristic portions of a document. ... The document extract comprises only a portion of the document that is most characteristic for the document as a whole. ... Thus, the search index is based on the document extract, and not on the document itself.”

Therefore, in Paragraph 34 when queries are made by a user,

“An indexer 206 ... decomposes the document extract 210 into a set of tokens, e.g., words, keywords, that are then stored together with their positional information in a search index 207, which forms the basis for the actual search engine. ... the search service 200 is coupled to the indexer 206, which allows the client 201 to issue search queries 212 against the search index 207...”

The search index 207 of Prokoph is not described as a web index. As defined herein and in the claims, "said enhanced web index contains document information and text, metadata and anchor text". Metadata and anchor text obviously are not being considered or included by Prokoph.

Therefore, there is no basis for stating that Prokoph searches “an enhanced web index of documents with user queries” and then adds “information from at least some of said user queries to said enhanced web index.” There is no such teaching or suggestion in this reference. In contradistinction, he teaches that web indices should not be utilized at all.

Cole does not deal with adding information to such a web index. Instead, Cole:

“provides methods ... which solve the problem of mismatch between the keywords employed by a user in making a query and those assigned by the ... classification system stored in the system's keyword index. ... If in a query session the user is satisfied with the object(s) retrieved from the repository, the system associates the initial keywords(s) with the retrieved object(s). ... The keyword index is modified directly ...” (Column 1, lines 6 - 10).

In particular, Cole is working with a “keyword index” as opposed to a “web index.” These are two entirely different types of indices with very different purposes.

As defined by Cole,

“Whether the classification is manual or automatic, in either case the result is a keyword list with associated data that can be used to retrieve relevant objects for a user query. ... each word or phrase in the keyword list points to a list of objects which were classified by that word or phrase, and that list of objects is returned when the query contains that word or phrase. ...” (Column 1, lines 36- 47). This is contrasted with the herein Application where there is a clear description that it is dealing with a web index that includes document information and text, metadata and anchor text.

With this background in mind, Cole’s summary of the invention can be understood. When it says “the present invention provides a method... to modify the associations between

objects in the database and keywords in the index, based on keywords supplied by the user during a search session,” (Column 2, lines 5 -11), it means that the keyword index is changing. Nowhere does Cole teach or suggest that a web index itself is modified.

As explained in detail by Cole:

“An example of a system implementing the present invention includes the parts shown in FIG. 1. ... The queries are passed to a Receiver (105). When the first query arrives from a user, the Receiver initializes a session log, and associates the log with this first query. .. Under Alternative A, the Receiver passes the query to a Search Engine (110), which matches the query against the (modified) Keyword Index (120). The keywords in the Keyword Index (120) are associated with one or more objects in the Repository (115). If the query matches one or more keywords in the Index (120), the data objects associated with those keywords, or a description of these objects, such as a hitlist of titles, thumbnails, etc., are retrieved from the Repository and returned to the Search Engine (110). The Search Engine (110) in turn passes them to the user interface (100). In Alternative B, where the Keyword Index does not change, the Receiver (105) passes the query to the Updating Module (125) besides passing it to the Search Engine (110). The Updating Module (125) matches the query against the Auxiliary Index (140), using a matching identical or similar to the matching done by the search engine. The Auxiliary Index (140) includes keywords associated with data objects in the Repository. In some embodiments, the Auxiliary Index (140) has the same structure as the Keyword Index (120). Under Alternative B, both the Search Engine (110) and the Auxiliary Index (140) return the relevant data objects (or descriptions) to Responder (135). The Responder (135) merges the two lists and passes the combined result to the user interface (100).” (Column 3, lines 1 – 39)

It is clear that, by the “Repository 115”, Cole is referring to what Applicants call the document index. Instead of adding the query words to it, Cole is adding the query words to his keyword list in his search engine. Accordingly, it is clear that Cole does not teach or suggest “adding information from at least some of said user queries to said enhanced web index.” Cole adds nothing to the document index (what he calls a Repository), and certainly not to a web index.

Moreover, in describing how the system operates, Cole nowhere mentions that a web index is updated or modified based on the queries.

“ ... The user submits a query (401) which is matched against the Keyword Index (405) and against the Auxiliary Index (410) under Alternative B. If this is the user's first query in a session (412), the query (and its statistics) is stored in the Updating module (413). The matched keywords are used by the system to retrieve objects associated with them (425). The objects (or their description) are then displayed to the

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user (430). If the user enters a response which indicates satisfaction (440), the first query stored (in step 413) is parsed into keywords (445). Each keyword is associated with an object, and optionally, statistics of date and usage are updated for each association (450). Under Alternative A, the Master Index is updated with these associations directly (455). Under Alternative B, the Auxiliary Index is updated (460).” (Column 4, line 54, - Column 5, line 2).

Cole teaches that either the Master Index or the Auxiliary Index is updated, but nowhere teaches or suggests that the document index should be updated.

The association of new keywords with data objects is implemented in different ways, depending on whether modification of the master keyword index is allowed or desirable. Two alternative example embodiments are described below. Alternative A details a case in which the keyword index is modified directly. This is feasible, for example, when a single service or application controls the interaction between user and repository, end to end. Alternative B details the case in which the master keyword index is not modified. This is the case when the process interacting with the user does not have permission to change the master index. This occurs when, for example, only experienced librarians may have authorization to modify it. In this case, new keywords are stored in an auxiliary index. An external process merges both the master and auxiliary indices before returning the results to the user. (Column 2, lines 40 -67)

Thus, Cole recognizes that it is not updating a web index. The summary of the invention states that it is “a method... to modify the associations between objects in the database and keywords in the index, based on keywords supplied by the user during a search session.” (Column 2, lines 5 -10) The master index is the main keyword index which can be modified by only authorized users. When the system is not used by authorized users then an Auxiliary Keyword Index is created and modified. In either case, however, the index of information itself is not being changed. On the keyword index is being changed.

In summary, Prokoph does not disclose or suggest searching a web index and does not mention updating any document index, let alone a web index, based on words used in a query. Cole also makes no mention of web indices and discusses only updating the keyword indices. There is no teaching or suggestion of updating any document index, let alone a web index, based on words used in a query. Only a keyword index is updated, but not any document index.

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Accordingly, Applicant asserts that Prokoph in combination with Cole neither teaches nor suggests the limitations of claims 37 or 56. Accordingly, Applicant respectfully asserts that independent claims 37 and 56 are allowable. Claims 38 – 45 and 57 – 63 depend from, directly or indirectly, claims 37 and 56 and therefore include all the limitations of those claims. Therefore, Applicant respectfully asserts that claims 38 – 45 and 57 – 63 are likewise allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejections to claims 38 – 45 and allow claims 38 – 45 and 57 – 63.

In view of the foregoing amendments and remarks, the ending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this response to Deposit Account 09-0468.

Respectfully submitted,

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Date: 4 May 2009  
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